Implementation of 4-Bit Two Step ADC. *

*Note: With Thermometer Code to binary Code Converter

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***Abstract*—A Two step Flash converter or Parallel,Feed-Forward ADC is separated into two complete Flash ADC with Feed-Forward circuitry.Which has a Flash ADC with Resistor string DAC along with a Sample and Hold circuit.The advantage of this architecture are that the comparators is greatly reduced from (2$^N - 1)to2(2^N/2 - 1)comparators$.**

***Index Terms*—Two-step ADC,Comparator,Residual Amplifier**

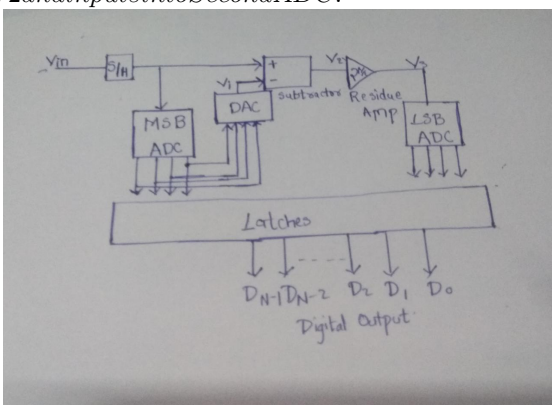
I. Introduction

The trade-off is the conversion,while two step instead of one,The conversion process is as follows:

After the inputs is sample,the most significant bits(MSBs) are converted by the first Flash ADC.

The result is then Converted Back to a analog Voltage with the DAC and subtracted with orginal input.

The result of subtraction is known as Residue is then Multiplied by $2^N/2and inputs into Second ADC$.



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II. References

Implementation of 4-Bit Two Step Flash ADC Using 180nm Technology

CMOS Circuit Design,Layout,and Simulation. R.Jacob Baker.